

Notice of Allowability

Application No.

09/992,247

Examiner

Luke S. Wassum

Applicant(s)

WAKABAYASHI, RYUJI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 20 July 2004.
2. ☒ The allowed claim(s) is/are 1-3 and 6-8.
3. ☒ The drawings filed on 20 July 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



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DETAILED ACTION

Response to Amendment

1. The Applicant's amendment, filed 20 July 2004, has been received, entered into the record, and considered.

2. As a result of the amendment, claims 1, 4 and 6-8 have been amended, and claims 4, 5 and 9-11 have been canceled. Claims 1-3 and 6-8 remain pending.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The Applicant's amended drawing, comprising updated Figure 6, filed 20 July 2004, has been received, entered into the record, and considered. The drawing is approved.

5. In view of the replacement drawing, the examiner withdraws the pending objection to the drawings.

Claim Rejections - 35 USC § 112

6. In view of the cancellation of claim 5, the examiner withdraws the rejection under 35 U.S.C. § 112, first paragraph.

7. The examiner finds the Applicant's arguments regarding the rejection of claim 4 (now cancelled, but with the limitations having been incorporated into independent claims 1, 6, 7 and 8) under 35 U.S.C. § 112, second paragraph, persuasive. The rejection is thus withdrawn by the examiner.

Allowable Subject Matter

8. Claims 1-3 and 6-8 are allowed.

9. The following is an examiner's statement of reasons for allowance:

The present invention is directed to a system for backing up a database management system having a plurality of databases, whereby update information and interrelation information is transmitted from the primary database(s) to the backup database(s), said interrelation information comprising a serial number, and wherein a serial number of the immediately preceding update is transmitted as the interrelation information when there is no other update information related to the current update information.

The closest prior art of record, **Bailey et al.** (U.S. Patent 5,794,252) teaches a backup system including a database apparatus having a plurality of databases wherein update information and interrelation information is transmitted from the primary database(s) to the backup database(s) (see disclosure of the use of the Master Audit Trail (MAT) and audit image records to transmit database

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changes, col. 2, lines 18-46; see also disclosure of COMMIT/ABORT indicators, which link specific database actions into a single transaction, col. 7, lines 59-61; see also col. 12, lines 55-66).

However, **Bailey et al.** fails to anticipate or render obvious the recited feature of a system for backing up a database apparatus having a plurality of databases wherein said interrelation information comprises a serial number, and wherein a serial number of the immediately preceding update is transmitted as the interrelation information when there is no other update information related to the current update information, as in independent claims 1, 6, 7 and 8. These features provide the advantage that each update can be processed immediately on the backup database(s) when there is no interrelated update information, wherein in the prior art, such an update would be held waiting in case interrelated update information might arrive at a later time.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 2 and 3 being definite, enabled by the specification, and further limiting to the independent claim, are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

PTO Relocation

10. Applicant(s) should be aware that the examiner is currently scheduled to move to the new Alexandria campus in late October 2004. At that time, the examiner's telephone number will be changed to (571) 272-4119. The new Tech Center 2100 main telephone number will be (571) 272-2100.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimazaki et al. (U.S. Patent 5,307,481) teaches a highly reliable online system providing a backup computer center in addition to an original computer center in order to improve the reliability of the online system.

Scott et al. (U.S. Patent 5,649,195) teaches a system for synchronizing a plurality of databases for a plurality of geographically dispersed computers in receive-only communication.

Lin et al. (U.S. Patent 5,713,017) teaches a consistency control method for a fault tolerant file system.

Eastep (U.S. Patent 5,740,434) teaches a system for maintaining database integrity utilizing a LOG file organized into slots with the number of slots never exceeding the largest number of concurrent transactions updating the database.

Stegelmann (U.S. Patent 6,772,155) teaches a database system including a storage module containing a table having plural rows, and wherein mutation ids are used to ensure database integrity during updates.

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Cotner et al. (U.S. Patent Application Publication 2002/0174108) teaches a system for managing transactions on a plurality of database management systems residing on separate participant servers and a coordinating server.

Sharma ("Fault Tolerance in Transaction Systems") teaches a survey of two schemes for fault tolerance for different fault models.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 703-305-5706. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 703-746-5658.

Customer Service for Tech Center 2100 can be reached during regular business hours at (703) 306-5631, or fax (703) 746-7240.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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lsw
26 August 2004